

a database for controlling the passage of data packets between the ports, the database comprising a first data table for holding data entries each comprising a network address; and

means for accessing said first data table in response to network address data in said packets; and

further comprising a second data table containing entries comprising forwarding data including a destination media access control address; wherein:

Q2 said entries in the first data table each include a pointer to an entry in said second data table.

7. (New) A network switch according to claim 6 wherein the pointers associated in said first data table with network addresses which share a common media access control address in said switch all identify a single common entry in said second data table.

8. (New) A network switch according to claim 6 wherein said means for accessing comprises means for hashing network address data of said packets to access said first data table.

9. (New) A network switch for a packet-based data communication network, comprising a plurality of ports for the reception and transmission of data packets which include network address data and media access control address data, comprising:

a database for controlling the passage of data packets between the ports, the database comprising first and second data tables, wherein:

said first data table holds data entries each comprising a network address and a pointer to an entry in said second data table; and

said second data table contains data entries each including a destination media access control address and an identification of a port;

whereby different entries in said first data table can contain pointers to the same data entry in said second data table.

10. (New) A network switch for a packet-based data communication network, comprising a plurality of ports for the reception and transmission of data packets which include network address data and media access control address data, comprising:

a database for controlling the passage of data packets between the ports, the database comprising first and second data tables, wherein:

said first data table is accessible in response to network address data in said data packets and holds data entries each comprising a network address and a pointer to an entry in said second data table; and

said second data table contains data entries each including a destination media access control address and an identification of a port;

whereby different entries in said first data table can contain pointers to the same data entry in said second data table.

11. (New) A network switch according to claim 10 and further comprising hashing said network address data in said packets to access said first data table.